

State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Aquatic Resources
Honolulu, Hawaii 96813

October 24, 2008

Board of Land
and Natural Resources

Request for Approval of a Special Activity Permit for Dr. Phillip Crews, University of California
at Santa Cruz, to Conduct Scientific Collection Activities in Certain State Marine Waters, Island of
Hawai'i Only, on Sponges, Marine Algae, Invertebrates, and Marine Sediments

Submitted herewith for your consideration and approval is a Special Activity Permit as authorized in Section 187A-6, Hawaii Revised Statutes (HRS). Section 187A-6 provides that the Department may issue permits no longer than one year (from date of issue) to any person to take aquatic life, possess or use fishing gear, or engage in any feeding, watching, or other such non-consumptive activity related to aquatic resources otherwise prohibited by law for scientific, educational, management, or propagation purposes, subject also to Chapter 195D and any other restrictions the Department deems desirable.

Such permits are usually sought by University researchers and their students, professional biologists, consultants, aquariums, or public and private school teachers to either collect aquatic life otherwise considered unlawful, or to use gear otherwise considered unlawful, primarily for the purposes of study or education. Dr. Crews proposes to collect several identified species of sponge, marine algae, nudibranch eggs, and marine sediments from State marine waters around the island of Hawai'i, in order to investigate their chemical ecology and natural product potential relative to developing new therapeutic leads for cancer, leukemia and other diseases. This research is a collaboration between UC-Santa Cruz and Indonesian research institutes, and is sponsored by the U. S. State Department.

The Division of Aquatic Resources has reviewed the application for impact and made recommendations to conserve resources as well as to minimize impacts to those resources. While this activity appears to be a form of bioprospecting, there are currently no regulations against such actions in Hawaiian waters. That said, the applicant has worked with the Division to minimize the impacts of their proposed activities. Among other permit provisions, the Division will require photo-documentation of each habitat impacted both pre- and post-collection. Strong restrictions have been placed on the number and weight of organisms to be allowed to be collected. While a number of the organisms to be collected are not regulated by the State, their life history involves them being associated with live rock, which is fully regulated against take or damage under HAR 13-95-71; the Division has placed special restrictions within this permit to minimize damage to any live rock or coral encountered during these activities.

RECOMMENDATION:

"That the Board Authorize and Approve, With Stated Conditions, This Special Activity Permit for Dr. Phillip Crews, University of California at Santa Cruz, to Conduct Scientific Collection Activities in Certain State Marine Waters, Island of Hawai'i Only, on Sponges, Marine Algae, Nudibranch Eggs, and Marine Sediments."

Respectfully submitted,

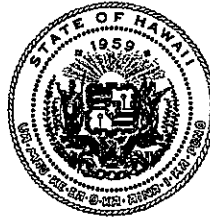
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DAN POLHEMUS
Administrator

APPROVED FOR SUBMITTAL:

A handwritten signature in black ink, appearing to read 'Laura H. Thielen', with a large, sweeping loop on the left side.

LAURA H. THIELEN
Chairperson



SPECIAL
ACTIVITY
PERMIT

SAP 2009-10

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
HONOLULU, HAWAII 96813

Date Issued 10/24/08

Not Valid After 3/24/09

SPECIAL ACTIVITY PERMIT

The Department of Land and Natural Resources (the Department) hereby grants permission for certain activities involving aquatic life belonging to the people of Hawai'i under the authority of Section 187A-6, Hawai'i Revised Statutes, and other applicable laws, to:

Permittee: Dr. Phillip Crews
University of California at Santa Cruz
Department of Chemistry and Biochemistry
1156 High Street (831) 459-2603
Santa Cruz, CA 95064

This permit is issued, subject to the general and special conditions below, to take sponge, seaweed and nudibranch eggs, and impact live rock, subject to the other conditions of this permit. This permit allows the **TAKE, POSSESS, TRANSPORT, OR KILL** certain aquatic life from waters of the State, as follows below.

This permit, signed by the Department, authorizes the permittee, and only the designated assistants on the final page(s) of, or attachments to, this permit, to engage in activities otherwise prohibited by law, subject to the general and special conditions.

TYPES OF AQUATIC LIFE	SCIENTIFIC NAME	LIMITS	GEAR	LOCATIONS
Sponges	<i>Axinella</i> sp. <i>Damiriana</i> sp.	1 -2 specimens each species. Less than 1	Hand only, along with Special Conditions	Island of Hawai'i only ; along with Special

	<i>Erlus sp.</i> <i>Hiattrochota sp.</i> <i>Hyalonema sp.</i> <i>Kotimea sp.</i> <i>Microciona sp.</i> <i>Naniupi sp.</i> <i>Spirastrelia sp.</i> <i>Spongia sp.</i> <i>Xytopsues sp.</i>	kg wet weight each. No specimen larger than 10 cm x 10 cm x 10 cm; along with Special Conditions A, C & E.	D.	Conditions B. Written permission needed from DAR for other waters of the State of Hawai'i.
Marine Algae	<i>Bryopsis sp.</i>	1 -2 specimens, 1 kg wet weight; along with Special Conditions A, C & E.	Hand only, no specimens with holdfasts; along with Special Conditions D.	Island of Hawai'i only ; along with Special Conditions B. Written permission needed from DAR for other waters of the State of Hawai'i.
Invertebrates (Spanish Dancer Nudibranch)	<i>Hexabranchus sanguensis</i>	Maximum of 1 collection of eggs ONLY , less than 1 gram; along with Special Conditions A, C & E.	Hand only; along with Special Conditions D.	Island of Hawai'i - ONLY ; along with Special Conditions B.

Marine Sand/Mud		Maximum of 100 individual samples, less than 1 gram wet weight each; along with Special Conditions A, C & E.	Small mesh hand nets; along with Special Conditions D.	Island of Hawai'i — ONLY ; along with Special Conditions B.
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PART I. GENERAL CONDITIONS

1. The permittee and each assistant will not make the Department or the State of Hawai'i liable in any way for any claim of personal injury or property damage which may result from activity authorized by this permit; the permittee and each assistant agree to hold the Department and State harmless against any and all claims of injury, death or damage resulting from actions or omissions under this permit.
2. This permit conveys a privilege to engage in **ONLY** those activities under the jurisdiction of the Department. The permittee and each assistant are responsible for complying with all applicable authorities County, State and Federal requirements. This permit does NOT convey any privilege of access over or through private property.
3. The permittee and each assistant is individually responsible and accountable for his or her actions while conducting activities authorized by this permit; the permittee is additionally responsible and accountable for the actions of each assistant.
4. Any person whose name does not appear on this permit and is conducting any activity described herein is subject to prosecution for violation of State laws.
5. The permittee may request changes to the permit. Any such request to make changes to the permit must be made in writing and received by the Department at least forty-five days prior to the change. No change may be implemented without written approval from the Department. The addition of new assistants will require each individual to sign the Attachment page stating that they have read, understood, and agree to abide by all general and special permit conditions. Original signed versions of the Attachment page must be returned to the Department for validation; once approved, such persons are added to the permit.
6. This permit is neither transferable nor assignable to another person.

7. The permittee or assistant must carry a copy of this permit on location while conducting activities authorized by this permit.
8. Authority granted by this permit **ends** on the expiration date (i.e. "Not Valid After") on the first page of this permit. Within **one month** of the expiration date, or the cessation of activities covered under this permit (whichever comes first), the permittee agrees to **return this permit** to the Division with a **Collecting Report completed for the full duration of this permit**, reporting results of *all* collecting and other activities covered under this permit, and other information if required, under the special conditions.
9. The permittee and assistants agree to provide access to data obtained under this permit upon request of the Division of Aquatic Resources (the Division), to provide the Division one copy of each report prepared with such data and published for distribution, and to allow Department staff to inspect on permittee's premises organisms collected under this permit, or organisms and/or substrate maintained with such organisms.
10. Violation of any condition of this permit by any person may be cause for immediate revocation of the permit; the person responsible may be subject to penalty as provided by law; violation may be cause also for denial of future permit applications.

PART II. SPECIAL CONDITIONS

- A. **GENERAL STATEMENT:** This permit authorizes collecting, killing, possessing and inter-island/out-of-State transport of **dead** sponge, nudibranch eggs and seaweed, from the island of Hawai'i **ONLY**, subject to the other conditions of this permit. No live organisms may be transported inter-island or out-of-State.
- B. **LOCATIONS:** Collecting activities under this permit is limited to waters of the State of Hawai'i off of the island of Hawai'i **ONLY**, and is expressly prohibited at the following locations.

<u>ISLAND OF MAUI</u>	<u>ISLAND OF O'AHU</u>	<u>ISLAND OF HAWAI'I</u>
Kahului Harbor FMA ¹	Ala Wai Canal FMA	Hilo Bay FMA
Honolua-Mokuleia MLCD ²	Coconut Island MLR	Kealahakua Bay MLCD
Molokini MLCD	Diamond Head SFMA	Kailua Bay FMA

Ahihi-Kinau NAR ³	Haleiwa Harbor FMA	Kawiahae Harbor FMA
	Hanauma Bay MLCD	Old Kona Airport MLCD
<u>ISLAND OF LANA'I</u>	Heeiea Kea FMA	Lapakahi Bay MLCD
Manele Harbor FMA	Kapalama Canal FMA	Puako FMA
Manele-Hulopoe MLCD	Paiko Lagoon Wildlife Refuge	Waiakea PFA ⁴
	Pupukea MLCD	Wailea Bay MLCD
<u>ISLAND OF MOLOKA'I</u>	Waialua Bay FMA	Wailuku River FMA
Kaunakakai Harbor FMA	Waikiki MLCD	Wailoa River FMA
<u>ISLAND OF KAUA'I</u>		Waiopae Tidepools MLCD
Ahukini Pier FMA		West Hawaii Regional Fishery Management Area (comprising 9 Fish Replenishment Areas)
Hanamaulu Bay FMA		
Kapaa Canal FMA		
Waikaena Canal FMA		
Waimea Pier & Bay FMA		

¹ FMA -Fisheries Management Area; ² MLCD - Marine Life Conservation District; ³NAR - Natural Area Reserve; ⁴ PFA - Public Fishing Area

C. **COLLECTING PRACTICES:** The permittee is responsible for persons engaging in activities under this permit behaving professionally and responsibly, in a manner which does not generate conflict with public or private sectors, including fishing and dive-tour industries and local communities.

1. Collecting activities under authority of this permit must be supervised directly, on site, by either Dr. Crews or his appointed representative (who must be a signatory of this permit).
2. An approved alien species protocol will be filed with DAR prior to initiation of collection activities. Protocol will include mechanisms for ensuring that the individuals listed on this permit

do NOT serve as vectors for the transport or introduction of alien species through their activities. This is specifically aimed at the collection, handling, and movement of the sponges and seaweeds listed under this permit, along with various marine organisms that may be taken in habitats containing other listed invasive and alien marine species.

3. No extractive or invasive sampling will be done on or adjacent to any intact large (> 1 m diameter) live coral colony. Specific efforts will be made to avoid damage to any large colonies of coral.
4. Except as specified expressly in an approved collecting plan, no organism unlawful for taking or possession by reason of size, under law or administrative rule, may be collected or utilized under this permit.
5. No collecting activity will be conducted if the target species is in low abundance or density (less than 3 specimens within a single framed photograph). All collection sites will be GPS'd and a photograph of the GPS unit (including date, time and location) will be taken at the beginning of each dive. A pre-collection and post-collection photograph of each collection habitat (showing the target specimen in the pre-collection photo) will be taken with the same digital camera used to photograph the GPS unit for that dive.
6. The Division may require the permittee to accommodate presence of an observer specified by the Division during collection and research activities. A record will be kept of each collection comprising specific location, date, species and amount collected; and in cases of return to ocean, the same information along with notification to DAR prior to the return activity. These records will be made available to the Division upon request.
7. **SAND/MUD COLLECTION:** No living or dead vegetation, live rock or coral will be collected with sand and mud samples.
8. **NOTICE:**
 - a. Collecting generally - the permittee must give notice, in form specified by the Department, to DAR neighbor island offices and to the neighbor island office of the Department's Division of Conservation and Resources Enforcement (DOCARE), at least 24 hours prior to initial commencement of any collection activity under this permit to take place on a neighbor island outside of the island of Oahu.
 - b. Mass mortality - the permittee must notify DAR O'ahu within one day of

- 1) Any instance of major damage caused to coral or other marine natural resources as a result of collection or other research activities conducted under this permit.
- 2) Any un-planned mass die-off of collected material after field collection.
- 3) Any observed major damage to coral reef habitat observed while in the field.

c. **Fragmentation** - This permit provides for collection and manipulation of live sponges, algae and invertebrates that may be associated with regulated live rock. The permittee and assistants are allowed to collect organisms that may inadvertently damage live rock provided that selective breakage occurs in such a way as to minimize damaging live rock to the greatest extent possible. Fragmentation of sponges and algae should be done in such a manner as does not result in **any additional harm** to the remainder of the colony.

D. **GEAR AND METHODS**

Use of any chemical substances pursuant to Section 188-23, Hawai'i Revised Statutes, **electrical shocking devices, or explosives remains expressly prohibited.**

1. A small amount of ethanol may be used to preserve organisms collected; however, all such preservation of specimens shall occur aboard the main ship and not in the field or aboard the tender vessels. Under no circumstances shall any chemical be allowed with divers, boat tenders or assistants in the water or in the field aboard small boats.

E. **USE OF ORGANISMS:** Organisms and live rock taken from Hawai'i waters under authority of this permit may be used only for scientific study, except as authorized by prior written approval of the Division (or as detailed above):

1. Organisms collected under authority of this permit may not be used for personal consumption or sale; organisms collected under this permit may not be traded, bartered or loaned to other individuals, institutions or entities.
2. Written approval must be obtained from the Division prior to
 - a. Purchasing or any other acquisition of regulated organisms (regardless of origin) alive from any other party,
 - b. Transporting any live organism (regulated or not) out-of-State, or between islands;
 - c. Exchanging or donating any organisms collected under this permit to any other person, party or organization.
3. The permittee may not convey in any fashion (including, but not limited to, selling, trading, or giving) any specimen collected under this permit to any person or party in Hawai'i which does not

already have a permit from the Department authorizing possession of same and without direct, written approval from the Division.

4. No commercial use is allowed in any manner or from any derived product.

F. **REPORTS:** Upon expiration, the permittee must provide to the Division a final written report summarizing results of collecting activity carried out under this permit and the analysis of the data:

1. The annual report should provide a written explanation as to how the collection of and/or impact to these regulated marine species for this activity is benefiting the State of Hawai'i in general and specifically, the improved management of the species impacted.
2. The final report must describe, in form specified by the Department,
 - a. Names and total numbers/quantities of all specimens collected under this permit, specific collection location with GPS and photos (pre-and immediately post-collection of the immediate habitat the organisms was on,
 - b. Their dispositions (e.g. on display; released/returned to the ocean; died),
 - c. **Description of any additional benefits** beyond the scientific analysis provided to the Division or the public during the period;
3. An inventory of organisms (dead or alive) present at the facility or with the permittee the end of the report period, in form acceptable to the Division, must accompany the annual report;
4. **The annual report is due at the Division's Honolulu office within one calendar month after expiration of the permit, or the cessation of activities covered under this permit (whichever comes first), and is required prior to any renewal of this permit.**

VALIDATING SIGNATURE

LAURA H. THIELEN, Chairperson

Board of Land and Natural Resources

cc: DLNR Division of Conservation and Resources Enforcement

Special Agent in Charge, US Fish and Wildlife Service Honolulu

ACKNOWLEDGING SIGNATURES

By signature below, I attest that I have read and understand the General and Special Conditions of Special Activity Permit SAP 2009-10 and that, further, I agree to comply with all of these conditions when collecting under authority of this permit.






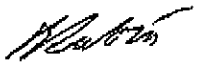
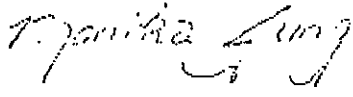


10/3/09

Phillip Crews

Primary Permittee

Designated Assistants

<p>Sign </p> <p>Type name ROGER LININGTON</p>	<p>Sign </p> <p>Type name LAURA Sanchez</p>
<p>Sign </p> <p>Type or print KIMBERLY N. WHITE</p>	<p>Sign</p> <p>Type or print</p>
<p>Sign </p> <p>Type or print Katie R. Watts</p>	<p>Sign</p> <p>Type or print</p>
<p>Sign </p> <p>Type or print Eric Mejia</p>	<p>Sign</p> <p>Type or print</p>
<p>Sign </p> <p>Type or print BRENT KANIKIA RUTTER</p>	<p>Sign</p> <p>Type or print</p>
<p>Sign </p> <p>Type or print MONIKA JUNG</p>	<p>Sign</p> <p>Type or print</p>